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ABSTRACT

Although infrequently investigated, college student satisfaction and dissatisfaction are viewed as a clear indicator of student unrest. Results of a series of studies aimed at a systematic investigation of college student satisfaction are described. A measure was designed and used to investigate the relationships between student satisfaction and other aspects of student life. Four hundred and sixty-three Iowa State University students were administered the College Student Satisfaction Questionnaire (CSSQ) which measures six dimensions of student satisfaction: (1) policies and procedures; (2) working conditions; (3) compensation; (4) quality of education; (5) social life; and (6) recognition. From the initial 139-item instrument administration and analysis, a 92-item revised form was developed. Utilization of the questionnaire to date indicates that it is an internally consistent measure of several dimensions of college student satisfaction. Further research is stressed as necessary to produce evidence regarding the validity of the scales and for general refinement. (TL)

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An Investigation of One Aspect of College Unrest: College Student Satisfaction

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College student satisfaction and dissatisfaction, although possibly one of the clearest indicators of the extent of student unrest, is one of the least investigated variables in the college setting. Despite the recent sensitization of college administrators and faculty to student attitudes toward the college, there have been few studies focusing systematically on college student satisfaction, and little progress therefore in developing an accurate understanding of the components, correlates, causes or effects of this ever-present campus variable.

The major studies conducted in this area are those of Berdie (1944), Pervin (1967a, b), Pervin and Rubin (1967), and Levine and Weitz (1968). In one of the first published studies of college student satisfaction, Berdie investigated relationships between engineering students' "curricular" satisfaction and such performance measures as first year honor point ratio, high school grades and scores on a series of ability tests. Only one of eight performance measures, high school rank, was found to have a significant relationship with curricular satisfaction. Correlations between satisfaction and appropriateness of interest scores, while not significant, suggested that there might be a relationship between curricular satisfaction and appropriateness of interests.

Congruence of students with their environment was investigated as a predictor of student satisfaction by Pervin (1967a, b) and Pervin and Rubin (1967). The studies partially supported the congruence hypothesis, in that discrepancies between students' preceptions of themselves and their colleges were fcund related to dissatisfaction with college.

Levine and Weitz (1968) attempted to identify statistically the components of overall college student satisfaction. They factor analyzed job satisfaction responses of two groups of graduate assistants in psychology, extracting seven first-order factors: general satisfaction, intellectual stimulation, the assistantship job, the physical environment and setting, constraints, the social future, and a factor combining intellectual stimulation with freedom to pursue intellectual interests. Levine and Weitz's findings focused on the graduate students' job satisfaction rather than on their satisfaction primarily as students; thus, their results may or may not be generalizable to undergraduate student populations.

The purpose of the present paper is to report on findings of a series of studies conducted at Iowa State University, directed at the systematic investigation of college student satisfaction. The project has involved the development of a measure of college student satisfaction, and, using this instrument, the investigation of relationships between college student satisfaction and other aspects of student life.

Instrumentation

The College Student Satisfaction Questionnaire (CSSQ; Betz, Klingensmith & Menne, 1970) was designed to measure six dimensions of college student satisfaction:

Policies and Procedures - Those policies and procedures that affect the student's activities and progress, such as choice of classes, use of free time, opportunities to influence decisions affecting student welfare.

Working Conditions - The physical conditions of the student's college life, such as the cleanliness and comfort of his place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes.

Compensation - The amount of input (e.g., study) required relative to academic outcomes (e.g., grades), and the effect of input demands on the student's fulfillment of his other needs and goals.

Quality of Education - The various academic conditions related to the individual's intellectual and vocational development, such as the competence and helpfulness of faculty and staff, including advisors and counselors, and the adequacy of curriculum requirements, teaching methods, assignments.

Social Life - Opportunities to meet socially relevant goals, such as dating, meeting compatible or interesting people, making friends, participating in campus events and informal social activities.

Recognition - Attitudes and behaviors of faculty and students indicating acceptance of the student as a worthwhile individual.

The initial CSSQ was a 139-item instrument, developed from a pool of items thought to be representative of the six selected satisfaction dimensions. Format was a 5-choice Likert-type response alternative, modeled after the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967), a measure of job satisfaction. The five response alternatives ranged from "Very Dissatisfied" to "Very Satisfied", scored one to five points respectively. Scale scores were based on the sum of item responses.

After an initial administration of the instrument to 643 Iowa State University students in the fall of 1968, and analysis of the resulting data, a 92-item revised form was developed.

Using the average interitem correlation method (Menne & Klingensmith, 1969), internal consistency reliability coefficients for each of the six revised CSSQ scales were calculated, using 92 items from the 139-item administration. The reliabilities ranged from .85 to .92, with a median of .88. Scale score distributions were found to be relatively normal. Correlations between scales ranged from .39 (Social Life and Compensation) to .77 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

Using a new sample of 463 students attending Iowa State University during the winter quarter of 1969, the revised CSSQ was again administered, scored and analyzed. The results closely followed the findings based on the earlier CSSQ data. Internal consistency coefficients ranged from .85 to .91, with a median of .88. Again, scale score distributions were relatively normal. Correlations between scales ranged from .36 (Working Conditions and Compensation) to .80 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

Factor Analytic Studies

As a means of further evaluating and improving the separate scales, a series of factor analyses were carried out, using separately the data from the fall and winter student samples (Betz, Menne, Starr & Klingensmith, 1969). Three different factor analytic approaches were applied. The resulting item loadings were compared across samples and methods to determine the extent to which the derived factors were consistent across the two samples, and to ascertain the extent to which the statistically-derived factors agreed with the logically-developed scales.

Of the three methods, the most interpretable results were produced by the principal components method with highest correlations in the diagonal, summarized in Tables 1 and 2. In Table 1, for each factor, are shown the factor loadings for items which were among those five loading highest on either or both of the

two samples. The agreement in high-loading items for the two samples is greatest on the Compensation, Social Life, and Working Conditions factors, where four of the five highest loadings were on the same items for both samples. On the Quality of Education and Recognition factors, there was agreement between samples on three of the five highest loading items. There was little agreement in the highest loadings on the Policies and Procedures factor.

Table 2 compares the factor analytic dimensions with the logically-derived CSSQ scale content. For Quality of Education, Compensation and Social Life, all or almost all of the items in the logically developed scale were also among those loading .30 or above on the parallel factor. None of the 14 items on the Recognition factor came from the logically developed Recognition scale; the eight items on the Working Conditions factor all came from the logically developed Working Conditions scale; six of the nine items on the Policies and Procedures factor came from the logically developed scale.

Overall, the results of the factor analyses appeared to give considerable support for viewing education quality, social life, working conditions, compensation and recognition as important dimensions of college student satisfaction. The findings on the Policies and Procedures factor, however, were less consistent and it is therefore viewed as a tentative dimension. While concern with policies and procedures appeared on the factor for both groups, the highest loadings for the fall group were for items dealing with the worth of student ideas, while the highest winter group loadings emphasized student comfort items, suggesting a changing focus across samples or time.

Relationships with Other Variables

Two additional studies have been conducted to investigate relationships between the six CSSQ scales and other variables. In the first (Betz, Klingensmith & Menne, 1970), the unique effect of sex, type of residence, and year in school on the six CSSQ scales was evaluated by analysis of covariance.

Significant F-ratios were found for the effects attributable to type of residence on student satisfaction with Policies and Procedures, Working Conditions, Compensation, Quality of Education and Social Life. Year in school was found significantly associated with satisfaction on four scales: Policies and Procedures, Compensation, Quality of Education and Social Life. Sex differences were not significantly related to satisfaction on any scale.

In general, the satisfaction of fraternity and sorority residents on the Working Conditions scale was higher than that of dormitory residents; fraternity students also scored higher than male dormitory residents on the Social Life scale. On the other hand, dormitory residents appeared to express greater satisfaction than did fraternity and sorority residents on the Policies and Procedures, Compensation, and Quality of Education scales. Differences for year in school were less readily interpretable, but suggested a downward trend, with freshmen typically scoring highest on the various satisfaction scales.

Sturtz (1970) compared the college satisfaction of a group of adult (age 25 or above) women students with that of 18 to 21-year-old women students, utilizing three of the six CSSQ scales, and a total satisfaction score based on the sum of all CSSQ items. The scores of the adult women were significantly higher on the Policies and Procedures and Quality of Education scales, and also on total satisfaction. There was no difference between the two groups on the Social Life scale.

Discussion

The results of the several studies conducted with the CSSQ in the past two years indicate that the instrument is an internally consistent measure of several dimensions of college student satisfaction. Some initial support for the potential usefulness of the scales has been suggested by the factor analytic studies and by the findings in relation to type of residence, year

in school, sex and age. Further research is needed, however, to produce adequate evidence regarding the validity of the scales, and to refine the measures generally. In particular, the inter-scale correlations are higher than desirable, especially those between the Policies and Procedures, Quality of Education, and Compensation scales.

Further studies are currently being conducted to investigate the relationships of CSSQ dimensions with college grades and with dropping out of college. Satisfaction of college protesters and extracurricular leaders is also being investigated in relation to the CSSQ scale scores. In addition, the CSSQ is currently being administered in a number of colleges and universities in various parts of the country. It is anticipated that this administration will provide information regarding similarities and differences in student satisfaction in different types of colleges; the data will be published in the form of norms for colleges of different types and in different parts of the country.

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Table 1

Items loading highest on six factors of college student satisfaction, separately for two student groups

Factor and Item	Factor Loadings	
	Fall[a]	Winter[b]
Quality of Education		
The chance to take courses that fulfill your goals for personal growth.	-.52	-.43
The chance to prepare well for your vocation.	-.59	-.67
Your opportunity here to determine your own pattern of intellectual development.	-.58	-.62
The practice you get in thinking and reasoning.	-.59	-.57
The quality of the education students get here.	-.42	-.59
The preparation students are getting for their future careers.	-.46	-.58
The appropriateness of the requirements for your major.	-.57	-.54
Compensation		
The amount of time you must spend studying.	.68	.66
The difficulty of most courses.	.61	.66
The amount of work required in most classes.	.58	.62
Teachers' expectations as to the amount that students should study.	.56	.63
The amount of study it takes to get a passing grade.	.64	.61
The pressure to study.	.63	.55
Social Life		
The chances for men and women to get acquainted.	-.78	.80
The choice of dates you have here.	-.74	.81
The chance of having a date here.	-.72	.79
The activities that are provided to help you meet someone you might like to date.	-.76	.74
The chance to work on projects with members of the opposite sex.	-.63	.61
The social events provided for students here.	-.67	.47
Recognition: Availability of Help		
The ability of most advisors in helping students develop their course plans	.53	-.60
The interest that advisors take in the progress of their students.	.55	-.63
The availability of your advisor when you need him.	.45	-.59
The counseling that is provided for students here.	.31	-.53
The amount of personal attention students get from teachers.	.48	-.33
The friendliness of most faculty members.	.46	-.42
The willingness of teachers to talk with students outside of class time.	.38	-.45

Factor and Item	Factor Loadings	
	Fall[a]	Winter[b]
Policies and Procedures		
The chance to participate in making decisions about school regulations.	-.59	-.51
The extent that student opinions influence important decisions about the school	-.62	-.38
The chance to tell the administration what changes you think are needed in the coursework here.	-.57	-.34
The chance for informal contacts between teachers and students outside of class.	-.54	-.32
The respect that is shown for the ideas of students.	-.55	-.17
The availability of comfortable places to lounge.	-.18	-.60
The places where you can go just to rest during the day.	-.20	-.61
The places provided for students to relax between classes.	-.23	-.59
The concern here for the comfort of students outside of classes.	-.47	-.47
Working Conditions		
The chances of getting a comfortable place to live.	.47	.59
The noise level at home when you are trying to study.	.47	.66
The cleanliness of the housing that is available for students here.	.46	.50
The availability of good places to study.	.64	.60
The availability of quiet study areas for students.	.56	.58
The chance to live where you want to.	.49	.45

[a]For fall student group, N = 643

[b]For winter student group, N = 492

Table 2

Comparison of Significant Factor Loadings for CSSQ Items,

Based on Responses by Two Groups of University Students.

Factor	Common variance Fall[a]	Common variance Winter[b]	No. of items agreed upon	No. of items from logical scale	No. of items from other scales	No. of items in logical scale
Quality of Education	18.30	20.22	19	14	5	16
Compensation	17.08	20.99	16	15	1	15
Social Life	21.66	15.79	17	17	0	17
Recognition: Help	13.95	15.26	14	9	5	17
Policies & Procedures	15.52	13.71	9	6	3	16
Working Conditions	13.49	14.04	8	8	0	13

[a]For fall student group, N = 643

[b]For winter student group, N = 492

THE MEASUREMENT AND ANALYSIS OF COLLEGE STUDENT SATISFACTION

Ellen L. Betz, John E. Klingensmith,
and John W. Menne

Abstract

The present paper reports findings relative to the development and current status of the College Student Satisfaction Questionnaire (CSSQ), part of a project directed at the systematic study of college student satisfaction as an analogue to job satisfaction. Psychometric findings included internal consistency reliability coefficients for the six CSSQ scales ranging from .85 to .91, with a median of .88. Scale score distributions were relatively normal. Correlations between scales ranged from .36 to .80, with a median of .54. Indications of construct validity were suggested by analysis of covariance results indicating that type of residence and year in school, but not sex, were significantly related to scores on several satisfaction dimensions. Additional studies are suggested to improve the CSSQ further and to extend understanding of college student satisfaction.

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THE MEASUREMENT AND ANALYSIS OF COLLEGE STUDENT SATISFACTION

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Studies of college and student characteristics have proliferated in recent years in an effort to measure and understand student attitudes and college adjustment. A number of well-developed instruments are available for the study of such variables as the college environment (Pace, 1963; Astin, 1963), student needs (Stern, 1963), and student-environment congruence (Pervin, 1967 a,b). In contrast, however, there has been a dearth of systematic research focusing on college student satisfaction. Relatively little progress has been made toward developing and evaluating measures of college student satisfaction, or toward understanding the nature of student satisfaction, the components, correlates, causes of effects of this ever-present campus variable.

In one of the few published studies of college student satisfaction, Berdie (1944) investigated relationships between engineering students' "curricular satisfaction" and such performance measures as first year honor point ratio, high school grades, and scores on a series of ability tests. Berdie's satisfaction measure was an adaptation of Hoppock's (1935) Job Satisfaction Blank, with the satisfaction score based on the sum of responses to four items. Only one of eight performance measures, high school rank, was found to have a significant relationship with curricular satisfaction. In the same study, Berdie investigated correlations between satisfaction and masculinity-femininity, occupational level, and appropriateness of interest patterns. The results for masculinity-femininity and occupational level were not significant, but there were indications of a relationship between appropriateness of interest scores and curricular satisfaction.

Pervin (1967a, b) and Pervin and Rubin (1967) assessed students' perceived congruence with their environment as a predictor of college student satisfaction, using single items to measure separate aspects of satisfaction. These studies supported the investigators' hypothesis that discrepancies between students' perceptions of themselves and their colleges are related to dissatisfaction with college.

Rand (1968) investigated relationships between college student satisfaction and deviations from an institutional mean on measures of interests, abilities and subcultural orientation. The satisfaction measure consisted of a single item on a 3-point response scale. Rand found some significant relationships between individual-environment similarity and student satisfaction, but concluded overall that the relationship appears to be minimal and quite complex.

In general, the findings of the few existent studies of college student satisfaction in the major research literature provide little basis for conclusions or generalization. For the most part, measurement of college student satisfaction has been based upon instruments of unknown or limited psychometric quality; there has been no systematic research on college student satisfaction as a significant variable per se.

The present research is part of a project directed at the intensive study of college student satisfaction. It is based on the premise that the study of college student satisfaction can draw upon principles and methods which have resulted from years of research on the satisfaction of employees in business and industry (e.g., Herzberg, Mausner, Peterson & Capwell, 1957; Hoppock, 1935; Vroom, 1964). The purpose of the present paper is to describe the development and current status of an instrument, the College Student Satisfaction Questionnaire (CSSQ), designed to measure college student satisfaction as an analogue to job satisfaction, and to report initial findings regarding relationships between aspects of student satisfaction and three demographic variables in the typical college or university setting: sex, type of residence, and year in college.

Method

Instrumentation

The CSSQ was designed to measure six dimensions of college student satisfaction selected on the basis of job satisfaction research regarding components of satisfaction (e.g., Herzberg, et al., 1957) and also considering possible additional variables unique to the college setting. The six selected dimensions were:

Policies and Procedures - Those policies and procedures that affect the student's activities and progress, such as choice of classes, use of free time, opportunities to influence decisions affecting student welfare.

Working Conditions - The physical conditions of the student's college life, such as the cleanliness and comfort of his place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes.

Compensation - The amount of input (e.g., study) required relative to academic outcomes (e.g., grades), and the effect of input demands on the student's fulfillment of his other needs and goals.

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Social Life - Opportunities to meet socially relevant goals, such as dating, meeting compatible or interesting people, making

friends, participating in campus events and informal social activities.

Recognition - Attitudes and behaviors of faculty and students indicating acceptance of the student as a worthwhile individual.

The initial CSSQ was a 139-item instrument, developed from a pool of items thought to be representative of the six selected satisfaction dimensions. Format was a 5-choice Likert-type response alternative, modeled after the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967), a measure of job satisfaction. The five response alternatives ranged from "Very dissatisfied" through "Satisfied" to "Very satisfied", scored one to five points respectively. Scale scores were based on the sum of item responses.

After an initial administration of the instrument to 643 Iowa State University students in the fall of 1968, and analysis of the resulting data, a 92-item revised form was developed. The number of items in the six scales varied from 13 to 17.

Using the average interitem correlation method (Menne & Klingensmith, 1969), internal consistency reliability coefficients for each of the six scales were calculated, using data from the 139-item administration. The reliabilities ranged from .85 to .92, with a median of .88. Scale score distributions were found to be relatively normal. Correlations between scales ranged from .39 (Social Life and Compensation) to .77 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

Subjects

Participants in the present study were 463 students attending Iowa State University during the winter quarter of 1969. The 92-item College Student Satisfaction Questionnaire (CSSQ) was administered at regular house meetings in dormitories, fraternities and sororities, chosen at random from a listing of all organized university residences. The resulting group included 297 male and 166 female students. Of these, 149 men and 112 women lived in university dormitories, 148 men were fraternity residents, and 54 women lived in sororities. The total group was comprised of 162 freshmen, 124 sophomores, 115 juniors, and 62 seniors.

Students in all groups were asked to give identifying personal information, with the assurance that results would be treated with complete confidentiality, and used for research purposes only.

Analysis

Scale reliabilities, distribution of scale scores, and correlations between scales were re-calculated for the new 92-item CSSQ data. The unique effect of each of the three demographic variables (sex, type of residence, and year in school) on scale scores of the CSSQ was evaluated by analysis of covariance. In a series of analyses, the variance attributable to each demographic variable was assessed separately, after removal of variance due to the two remaining variables treated as covariates.

Results

Results of the analyses of CSSQ scale characteristics closely followed the findings from analyses of the earlier CSSQ data. Internal consistency coefficients ranged from .85 to .91, with a median of .88. Again, scale score distributions were relatively normal. Correlations between scales ranged from .36 (Working Conditions and Compensation) to .80 (Policies and Procedures, and Quality of Education), with a median correlation of .54.

The results of the analysis of covariance studies are shown in Tables 1 through 6. Table 1 shows the intercorrelations of the three demographic variables with each other and with the six scale scores. Tables 2 through 6

Insert Table 1 about here

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show those results of the analyses of covariance which indicated significant relationships between a demographic variable and the separate scales.[1] In each table, the results of the total regression of the three demographic variables on the indicated CSSQ scale scores are shown opposite the term, "Regression." The adjusted regression values represent the effect of the indicated demographic variable alone, after subtraction of the effects of the covariates from the total regression effects.

Insert Tables 2 through 6 about here

The correlations shown in Table 1 indicate a high relationship between sex and residence, and low correlations between the demographic variables and scale scores, with the exception of the Social Life scale, which had moderately high correlations with both sex and type of residence.

The results of the analyses of covariance for the Policies and Procedures scale, shown in Table 2, include significant F-ratios for the effects attributable both to type of residence and year in school. The effects related to sex differences were not significant. For the Working Conditions scale, shown in Table 3, a significant F-ratio resulted for variance due to type of residence, but not for year in school or sex. Significant F-ratios resulted on the Compensation scale for both residence and year in school (see Table 4), but not for the sex variable. Similar findings resulted for the Quality of Education scale, shown in Table 5, and the Social Life scale, shown in Table 6; that is, significant relationships were indicated for both type of residence and year in school, but not for sex. Analyses of covariance on the Recognition scale resulted in no significant findings for any of the three variables, separately or combined.

In accordance with the recommendations of Hays (1963) and others, that data resulting in significant F-tests be additionally analyzed to determine the strength of the indicated association, estimated variance components were calculated and are shown in Tables 2 through 6. The variance components were relatively low, the highest for a single variable being 9.3 per cent, for the effect of type of residence on satisfaction with working conditions.

The direction of differences for the various groups and scales are suggested by group means shown in Table 7 for type of residence, and in Table 8 for year in school. (Since the number of items per scale varies from 13 to 17, scores across scales are not directly comparable.) In general, satisfaction of fraternity and sorority residents appears higher, as

Insert Tables 7 and 8 about here

might be expected, on the Working Conditions scale, and, for men, on the Social Life scale. Dormitory residents appear to express greater satisfaction than do fraternity and sorority students on the Policies and Procedures, Compensation, and Quality of Education scales. Differences for year in school are less readily interpretable, but possibly suggest a downward trend, with freshmen typically scoring highest on the various satisfaction scales.

Discussion

The results of the present study indicate that the College Student Satisfaction Questionnaire is an internally consistent measure of several dimensions of college student satisfaction. Some support for the construct validity of the scales is suggested by the results, although further research will be necessary to produce adequate evidence regarding the validity of the several CSSQ scales and to refine the measures generally. In particular, the inter-scale correlations are higher than desirable, especially those between the Policies and Procedures, Quality of Education and Compensation scales. Factor analytic studies are currently underway to evaluate the logically-derived scales in the light of statistically determined components of college student satisfaction.

The results of the analyses of covariance across the six CSSQ scales indicate that type of residence and year in school are related to several aspects of college student satisfaction, while sex differences seem to have little, if any, relationship with satisfaction on any of the measured dimensions after the effects of year and residence are removed.

Perhaps the most interesting finding is that type of residence seems to be related to satisfaction with academic aspects of college as well as with working conditions and social life. It is perhaps not surprising that sorority and fraternity students indicated greater satisfaction with working conditions and social life than did dormitory students, since fraternities and sororities have for years worked diligently to offer special opportunities in these areas. However, the generally lower scores of fraternity and sorority residents, as compared with dormitory residents, on three academically-oriented scales (Policies and Procedures, Compensation, Quality of Education) suggests the operation of a related, although as yet unidentified, factor of importance in regard to college student satisfaction. The relationships between type of residence and the academic satisfaction scores may, for example, be due to a selection factor operating in student choice of residence, or to some other factor, such as group leadership differences; the present study gives no indications of an answer to this question.

The findings regarding the relationship between year in school and satisfaction with specific aspects of college life might also have been anticipated by persons in close contact with student attitudes and activities. The results do not clearly indicate the direction or pattern of satisfaction changes over the college years; this is a question which can be clarified only with further study.

An indication of the probable complexity of college student satisfaction is provided by the low variance components derived in the present study. Thus, while type of residence and year in school were found to be related to aspects of satisfaction, the unexplained remaining variance was of major proportions and points to the need for extensive research to develop an understanding of college student satisfaction.

An additional limitation of the present findings is the specificity of the student group studied, being comprised entirely of Iowa State University students, and without complete randomization. Data on student satisfaction at a second university has now been collected and is being analyzed. This second sample marks the beginning of a series of studies across a number of colleges and universities in order to determine the generalizability of findings on college student satisfaction.

Overall, however, the results of the present study support the CSSQ as a potentially useful measure of college student satisfaction, and suggest numerous meaningful areas for future research.

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Footnotes

[1]Tables for the remaining analyses may be obtained by writing to the senior author.

Table 1

Correlations Between Sex, Year, Type of Residence and CSSQ Scale Scores for 463 University Students

Variable	Sex	Year	Residence
Policies and Procedures	-.05	-.12	-.04
Working Conditions	.00	-.06	.16
Compensation	-.02	-.05	-.06
Quality of Education	.01	-.16	-.12
Social Life	-.37	-.05	.38
Recognition	-.11	.01	.07
Sex		-.09	-.82
Year			.16

Table 2

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Policies and Procedures (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2027.43	7	289.63	3.92**	5.7%
Covariates (sex, year)	(-)	1018.50	4			2.9
Adjusted regression (residence)		1008.93	3	336.31	4.55**	2.8
Covariates (sex, residence)	(-)	1398.30	4			3.9
Adjusted regression (year)		629.13	3	209.71	2.84*	1.8
Residual		33629.55	455	73.91		

[a]Estimated variance component

*$p < .05$

**$p < .01$

Table 3

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Working Conditions (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2704.37	7	386.34	6.94***	9.6%
Covariates (sex, year)	(-)	95.18	4	23.80		0.3
Adjusted regression (residence)		2609.19	3	869.73	15.62***	9.3
Residual		25336.95	455	55.69		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 4

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Compensation (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		1479.89	7	211.41	2.91**	4.0%
Covariates (sex, year)	(-)	824.60	4			2.4
Adjusted regression (residence)		655.29	3	218.43	3.01*	1.6
Covariates (sex, residence)	(-)	708.71	4			2.0
Adjusted regression (year)		771.18	3	257.06	3.54*	2.0
Residual		33069.78	455	72.68		

[a]Estimated variance component
*p < .05
**p < .01

Table 5

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Quality of Education (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		2914.30	7	416.33	4.19***	6.1%
Covariates (sex, year)	(-)	1413.31	4			2.9
Adjusted regression (residence)		1500.99	3	500.33	5.03**	3.2
Covariates (sex, residence)	(-)	1911.96	4			4.0
Adjusted regression (year)		1002.34	3	334.11	3.36*	2.1
Residual		45219.57	455	99.38		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 6

Results of Analyses of Covariance for Effects of Residence, Year in School, and Sex on Satisfaction with Social Life (N = 463)

Source		SS	df	MS	F	VC[a]
Regression		11483.81	7	1640.54	14.60***	18.3%
Covariates (sex, year)	(-)	9327.26	4			14.9
Adjusted regression (residence)		2156.55	3	718.85	6.40***	3.4
Covariates (sex, residence)	(-)	10344.25	4			16.5
Adjusted regression (year)		1139.56	3	379.85	3.38*	1.8
Residual		51140.01	455	112.40		

[a]Estimated variance component
*p < .05
**p < .01
***p < .001

Table 7

Mean Satisfaction Scores and Standard
Deviations for Students Grouped by Type of Residence

Scale	Male Dormitories (N = 149)		Female Dormitories (N = 112)		Fraternities (N = 148)		Sororities (N = 54)	
	M	SD	M	SD	M	SD	M	SD
Policies and Procedures	41.52	9.14	43.24	8.04	39.72	8.59	38.39	8.73
Working Conditions	33.66	7.71	35.49	6.95	39.10	7.27	38.13	8.33
Compensation	40.52	8.81	40.19	8.64	37.78	8.64	38.30	7.65
Quality of Education	53.19	10.59	52.47	9.03	49.21	10.21	48.02	9.94
Social Life	45.40	10.01	56.79	10.01	50.50	11.08	56.63	12.62
Recognition	46.19	8.59	48.64	7.53	45.84	8.28	46.72	9.56

Table 8

Mean Satisfaction Scores and Standard Deviations
for Students Grouped by Year in College

	Freshmen (N = 162)		Sophomores (N = 124)		Juniors (N = 115)		Seniors (N = 62)	
	M	SD	M	SD	M	SD	M	SD
Policies and Procedures	42.88	8.56	39.76	7.79	39.97	9.06	40.44	10.03
Working Conditions	36.81	7.97	36.43	7.77	36.20	7.47	35.39	8.02
Compensation	40.04	8.76	38.12	8.15	40.75	7.95	37.06	9.93
Quality of Education	53.38	9.55	50.22	9.65	50.42	10.26	48.48	11.86
Social Life	52.42	12.43	49.10	10.98	52.27	11.39	49.45	10.72
Recognition	46.94	7.65	45.98	7.57	47.25	8.91	46.73	10.77